DR. (SHRIMATI) NAJMA HEPTULLA : You want a factory to produce engineers ?

SHRI SITARAM KESRI : How can we produce ?

*3Q3 *[The questioner (Shri N. Rajangam was absent. For answer* vide *col.* 32 infra]

Launching of ocean sensing satellite

*304. SHRI BIR BHADRA PRATAP SINGH :f

SHRI BHAGATRAM MANHAR :

Will the PRIME MINISTER be pleased to state :

(a) whether it is a fact that Indian scientists will be benefited in the matter of ocean development after the ocean sensing satellite is put in to th e orbit by the European Space Agency (ERS) next year;

(b) if so, what are the steps being taken by the National Institute of Oceanography to make use of ERS when it becomes operational; and

(c) whether it is a fact that the above Institute is receiving data from other Satellites launched by sonte other countries and if so, the details in this regard ?

THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY AND MINISTER OF STATE IN THE DEPARTMENTS OF OCEAN DE-VELPOMENT, ATOMIC ENERGY, ELECTRONICS AND SPACE (SHRI K. R. NARAYANAN) : (a) to (c) A statement is laid on the Table of the House.

fThe question was actually asked on tbe floor of the House by Shri Bir 'Bhaflar Parlay Singh.

Statement

(a) Yes, Sir.

(b) The National Institute of Oceanography (NIO) is interacting with the Department of Space to prepare itself to receive the ERS data after it has been put into orbit. As a part of pre-launch preparation, plans are being finalised to train scientists from NIO, at some international centres for miciowave and infra red sensors which will largely be used for the study of oceanography from space.

(c) Yes, Sir. The National Institute of Oceanc graph}' has been receiving data through Department of Space from the following satte-lites :—

1. LANDSAT, USA
2. NOAA, USA
3. TIROS, USA
4. SPOT, FRANCE
5. NIMBUS-VII, USA
6. SEA SAT. USA

SHRI BIR BHADRA PRATAP SINGH: Mf. Chairman, Sir, the European Speacc Agency and many other space agencies have launched many satellites for commercial use. But it requires huge amount of money if we want to purchase from them. When this is the case, I would like to know, what arc the overland facilities apart from the training which the hon. Minister has mentioned in his reply and what capability is being developed within the country to make use of the date collected through thesea sensing satellite.

SHRI K. R. NARAYANAN: We have already some facilities on the shore like the National Institute of Oceanography which are receiving even today the imageries and other data from the American and European satellites. Theyare already receiving

this information, processing them and analysing them. We also propose to set up other facilities, reception facilities, on land for processing the information further. We have set apart about Rs. 150 lakhs for these reception facilities on the shore and about Rs. 100 lakhs for processing. Of course, this is apart from the fees we have to pay for the European Remote Sensing Satellite.

SHRI BIR BHADRA PRATAP SINGH: Mr. Chairman, Sir, I would like to know from the hon. Minister, when does India plan to develop its own satellite for monitoring and sensing ocean resources. Part (b): I would like to know the places where these satellite receptors are being installed and whether they will be indigenously, manufactured: if not, the names of the countries from where these are being purchased so that they will prove uselful in addition to the INSAT-IB and other satellites which we have launched.

SHRI K. R. NARAYANAN: Sir already we have considerable knowledge of satellite technology. We have sent up an IRS satellite which is functioning perfectly well today and it has also taken some imageries of the sea, especially of the concentration of fish shoals in the sea. Also, to some extent, our INSAT satellite is also covering the sea and some information we are already getting with regard to the sea. But that would not be as full as if we had a satellite dedicated to surveillance of the sea itself. We hope to develop a satellite of our own for the sepecific purpose of sea surveillance, but we have not yet started it. Our priorit ies are today for INSAT type satellite of which, as the hon. Member knows, the second series would be manufactured by us. IRS-1A we have already manufactured in India and it has been launched in the Soviet Union and there would be more series of IRS satellites which willalsobemanu-ictured in our country.

SHRI BHAGATRAM MANHAR I agree that the satellite for ocea sensing will be uselful for collecting infoimation with greater Eccuiacy. But I would like to ask as to whether the remote ocaean sensing satellite will be able to place the information with the on-the-spot ships. If not, what are the agencies or places where this information will be collected. There have been a number of cyclones in the recent years but is any advance infoimation given about cyclones. We are using INSAT for studies of cyclones in rough seas as well. But would like to know to what extent we will be able to have more advance information correctly about cyclones from the ERS than we are receiving from INSAT and other satellites.

SHRI K. R. NARAYANAN: The sea remote sensing satellite will be able to give us belter infoimation about the formation on storms and cyclones. 1 would like to just mention the various purposes for which sea remote sensing is done. One is to measure the surface winds, the nature of it, sea winds-by which we can forecast storms and cyclones—and also help shipping, nan; portation etc. Also to measure sea levels, ocean currents, internal waves,—all these phenomena in the sea. Today survey and some forecasting can be done with the aid of the satellite data that we might get.

SHRI VISHWA BANDHU GUPTA: Sir, Iwould like to know from the hon. Minister whether apart from the metereological and other uses that he has mentioned, this sensing could behelpfultousindeep sea fishing also. And since this is a matter of high tech and going well into the 21st century, whether there is a projected plan in the Ministry for maximising the uses that he has mentioned.

SHRI K. R. NARAYANAN: Sir, it can certainly help in fishing. In fact one of the specific functions of the satellite is to locate concen! lition of shoals of fish which wouid

help our own fishery people to send their ships to that area for catching the fish. This is one of the important thing to detect the concentration of shoals offish.

As regards the second part of your question, yes, we are proceeding with remote sen ing. Deep sea study is different. For that we asked the Engineers India Ltd. to prepare a feasibility study for mining and they haveprepared suchastudy. Thethree phases I have ment ioned actually come from that study and they have forecast areas where by AD 2009-10 we would ba able to commercialise, the -mining operations.

DR. (SHRIMATI) NAJMA HEPTULLA: Sir, thank you for giving me the second opportunity becausehardly any que-tion onscience and technology comes up. Sir, I believe there is a massive plan of the Government of India to tap sea-wave energy and a big project is being put up in Goa. I would like to ask the honourable Minister whether this remote sensing satellite is going to help us in tapping our sea-wave energy to save us from the energy crisis and help us through the non-conventional source of energy and also help us in eradicating the pollution problem.

SHRI K. R. NARAYANAN: Sir, the remote sensing satellite will be helpful in the study of sea waves and, as a result of the study, it will be able to bring to bear upon the experiment or the project for generating energy from sea waves. As she has said, there is already a project in Goa. We also have a project, sponsored by the Department of Ocean Development, at Vizhinjam in Keraia where a plant is being set up for generating power from sea wave. The satellite will certainly help by giving data.

*305. *[The questioner (Shri Talari Manohar) was absent for answer* vide *col.* infra]

*306. *[The questioner {Shri K. V. Thangkabalu) was absent. For answer* vide *col.* 35 infra]

*307. *The questioner (Dr. Yelamanchili Sivaji*) *was absent. For answer* vide *col.* 36 infra].

Criticism of the Election Commission

*308. SHRI ASHWANI KUMAR: SHRI LAL K. ADVANI :t

Will the Minister of LAW AND JUSTICE be pleased to state:

(a) whether it is a fect that many times there has public
"of these lection Commission where it has accepted or re requests of States Governments for holding or postponing of an eh on one plea or the other; and

(b) whether the Election Commis sion has. therefore, requested Govem-ment . to lay down comprehensive guidelines in the Election Law itself for the timings of the General Elec tions and by-elections indicating the time-span within which such election should be held and the extent of the weightage to be given to the requests and pleas of State Governments, while finalising the poll programme; if so, whether Government are in favour of such a decision and propose to act accordingly?

THE MINISTER OF STATE IN THE MINISTRY OF LAW AND JUSTICE (SHRI HANS RAJ BHARDWAJ): (a) and (b) In order to avoid charges of arbitrariness and partiality in the matter of fixing of dates for elections, the Election Commission has proposed that the Elect ion Law may be suitably amended to include guidelines. No decision has yet been taken thereon.

†The question was actually asked on the floor of the House by Shri Lal K. Advani.